

## Original Article

# Increasing Community Capabilities In First Aid For Drowning People Through Basic Life Support

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### ABSTRACT

**Background:** It predicted that trauma or accidents would be the second leading cause of death after heart disease. Most accidents occur in public places and in the community. One of these accidents occurred in water areas, such as the Lematang River, Lahat Regency. This training aims to provide the ability to the community so they can provide first aid to victims to avoid death and disability. This training aims to determine the level of community knowledge in Perigi Village, Pulau Pinang District, and Lahat Regency about essential life support

**Methods:** The method of activity that will be used is Basic Life Support training. Participants will be given material about trauma, emergencies, and first aid methods with Basic Life Support (BHD). In connection with the importance of doing essential life support quickly on the survival rate of drowning sufferers, everyone should be trained to carry out basic life support measures. Basic life support measures taken by people in the vicinity of out-of-hospital sufferers immediately after the incident can increase the patient's survival rate

**Results:** From the results of the training carried out in Perigi village, Pulau Pinang sub-district, the results obtained were The level of education is very influential on the success rate of this training. In most communities, more than 60% have upper secondary education. It was found that the community had been able to carry out first aid for drowning people with the Basic Life Support technique of 68.6%.

**Conclusion:** It is essential to provide basic life support to the community to improve community safety and capacity, so the community must carry out regular training

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## Introduction

Indonesia is a country located between two continents and two

oceans. Indonesia is a country that has 18,108 large and small islands. The land area of Indonesia is 1.937 million km<sup>2</sup>, with a sovereign sea

area of 3.1 million km<sup>2</sup> and the Exclusive Economic Zone (EEZ) sea area of 2.7 million km<sup>2</sup>. The breadth of Indonesia's oceans makes this country dubbed a maritime country (Risksedas, 2018; WHO, 2015). Most victims are aged 5-14 years. In Indonesia, the exact number of drownings is not known. However, referring to the geographical conditions of the Indonesian territory consist of various islands with a reasonably long coastline that allows drowning to occur. Moreover, Indonesia is also a tourist area where the waters are also one of the tourist attractions owned. Although the facts above are very worrying, preventing drowning still receives little attention (Pelto & Drezner, 2020; Taukhid et al., 2021)

The act of handling people with drown is to provide BHD treatment. Essential Life Support is an emergency measure to clear the airway, assist breathing and maintain blood circulation without using assistive devices. Essential life support aims for adequate emergency oxygenation of vital organs such as the brain and heart through artificial ventilation and artificial circulation until the lungs and heart can usually meet the body's oxygen needs (Rimawati et al., 2018). Basic life support measures taken by people around the patient immediately after the incident can improve the patient's survival. Essential Life Support (BHD) actions that are delayed and not following the procedure will fail in rescue efforts for the patient (AHA, 2020; Otto et al., 2021).

Lahat Regency is an area that has many rivers and tributaries that

divide the city. Community activities are very dependent on the river. The risk of drowning is considerable in everyday life, whether during bathing, fishing, looking for rocks or sand, or during a disaster (flood) (Mayo, 2017). Maybe even in flood conditions, the incidence of drowning is substantial. Understanding BHD for ordinary people is very important because they are generally the first to arrive at the scene, starting with ensuring the safety of rescuers and victims. BHD assistance is a skill that must be mastered for every Layman when he encounters an emergency case.

In connection with the importance of doing essential life support quickly on the survival rate of drowning sufferers, everyone should be trained to carry out basic life support measures. Basic life support measures taken by people in the vicinity of out-of-hospital sufferers immediately after the incident can increase the patient's survival rate (Aini, 2019; Birkhead & Vermeulen, 2018; Sari et al., 2021). This training aims to determine the level of community knowledge in Perigi Village, Pulau Pinang District, and Lahat Regency about essential life support. In Germany, children aged 13 to 14 have been able to perform cardiopulmonary resuscitation as well as adults. In Indonesia, the Youth Red Cross (PMR), as an organization at the high school level that is engaged in the health sector, should already have members who can carry out basic life support actions properly and correctly (Suwardianto & Rimawati, 2018; Taukhid et al., 2021).

The Lahat District Health Office and the Regional Disaster Management Agency have only held a simulation of the handling of drowning victims once in the last five years, which these activities are only aimed at the relevant agencies, such as the Civil Service Police, the Police, the Social Service and others (Haedar, 2020; Sari et al., 2021).

With a long coastline and the beautiful shores of the Indonesian mainland, the beach is a favorite destination for family vacations during long vacations. One of the activities must be swimming (AHA, 2016; Merchant et al., 2020; Prastiwi, 2019). This swimming activity saves the risk of accidents that lead to death due to drowning or *drowning*.

Drowning is defined as death due to asphyxia within 24 hours due to being submerged in liquids, especially water. Every year, around 360,000 people die from drowning. More than 90% of deaths occur in developing countries. Half of the drowning victims were less than 25 years old. According to the South Sumatra Province Disaster Management Agency, Lahat Regency is a flood-prone area. The community's ability to handle drowning victims is still lacking. Through The Community Service Team, the D III Lahat Nursing Study Program felt compelled to improve the capacity of the community on the riverbank in handling drowning victims. Besides, this activity is a form of the Tri Dharma of Higher Education in which Lecturers are required to develop Science and Technology (IPTEK).

The topography of the Lahat Regency area, seen from its altitude, varies widely, namely an altitude between 25-100 meters above sea level with an area of 1,156 km (17.47%) and an altitude between 100-500 meters above sea level with an area of 2,520.90 km (38.09%), an altitude of 500-1,000 meters above sea level with an area of 1,532.22 Km (23.15%). So, in general, the Lahat Regency area belongs to the highlands, which are included in the Bukit Barisan groove with the highest peak, Bukit Selero, with an altitude of approximately 600 meters above sea level. Covering the districts of Kota Agung, Tanjung Sakti Pumi, Jarai and Pulau Pinang Districts. Perigi Village in Pulau Pinang District is an area that flows through the Lematang River. It consists of 4 hamlets, where the Village area is the Lematang River Bank area. Flood and Flash Floods disasters are the most significant risk factors in Perigi village. High amounts of rainfall can cause vulnerabilities that must be recognized during the heavy rainy season from November to April. So it is a threat of a flood disaster (Olympia et al., 2017; Taukhid et al., 2021; Torani et al., 2019).

Emergency conditions can occur anywhere and are not within reach of paramedics. Like drowning cases can happen anytime and anywhere. Geographical condition of Lahat Regency, especially the area. From the analysis of the partner's situation through interviews and observations in Perigi Village, Pulau Pinang District above, the problems and constraints are as follows, All people in Peigi Village do not know about Basic Life

Support. All the people in Perigi village do not know the correct way of drowning. Most people make a living as sand and stone artisans. Most bathing and washing activities are carried out in the river.

Based on the identification of problems faced by partners, five lecturers as executors of community service activities assisted by students. As university professionals, they will provide a solution to overcome public ignorance of how to help drown people properly and correctly. Students involved in this activity had previously been equipped with knowledge on how to help drown people with the BHD technique. The involvement of students in this activity will make it easier and faster to achieve the desired goals. The solution is offered to partners to transfer knowledge and skills related to Basic Life Support training. This Community Service Activity will focus on Health Promotion Activities, introducing or training to help drown people with Basic Life Support techniques. At this stage, the focus is on aspects of knowledge, especially: Know, namely: remembering a material that has been studied previously.

Moreover, Aspects of Application (*Application*), namely the ability to use the material that has been studied in the situation or condition of the rails (actually). This training involves all Karang Taruna and Cadre members in Perigi Village, Pulau Pinang District, and Lahat Regency. So it can be. It is hoped that this training will benefit the entire village community. The targets to be achieved through this activity are as follows: There is a change in people's

mindset about how to help to drown people, Forming a health-conscious community group, Increased community mastery of understanding BHD to the community, Increased mastery of the concept of BHD concretely in the community,

## Method

The first stage is planning the activities to be carried out. The planning process includes a field survey, including identifying problem needs, determining who will be given the training, determining the location of the training, and determining the date of the training. Planning is compiled together with village officials, youth organizations, and cadres. The second stage is the implementation of joint activities by the Community Service Team and village officials, especially youth organizations and cadres. The third stage is monitoring and evaluating activities. The Community Service Team carries out this process for the training participants themselves. The form of monitoring can be in the form of a questionnaire or questionnaire. In general, the methods of activities in this training are lecture, question and answer, and demonstration. The community's ability to BHD is improved by direct learning practice techniques with adult CPR manikins. A hands-on learning practice is applied to provide a simulation of how to help to drown people with Basic Life Support techniques.

This plan is implemented in several stages: At the stage of the focus of the implementation of activities, the emphasis is on the

preparation of teams and partners by coordinating jointly concerning the needs and implementation of activities. At this stage, activities are focused on where partners and the Lecturer team carry out activities. By focusing on aspects of knowledge and skills about BHD. The coaching stage is carried out with a monitoring system and community formation with partners so that partners can transmit the knowledge gained to other communities. In this activity, Partners play an essential role. Some of the activities carried out by Partners include a). In the preparation stage, the Partners and the Lahat Nursing Study Program Team held a stabilization meeting at the village head's house. b). Partners play a role at the implementation stage, among others: 1). Prepare the community at the village hall. 2). Prepare venue facilities and supporting infrastructure for the smooth running of the event.

## Results

This Science and Technology-based Community Service Program for the Community (IBM) targets all residents in Perigi Village, Pulau Pinang District, and Lahat Regency, especially members of Youth Organizations and Health Cadres. The number of partners was determined. Based on the number of members of youth organizations and health cadres, there are 35 participants. The problem that is the subject of this community service activity is improving the skills of handling drowning victims with Basic Life Support techniques.

Tabel 1. Presentation of Education

Education	Presentation
Elementary School	37.1
Junior High School	28.6
Senior High School	34.3
Total	100.0

The level of education is very influential on the success rate of this training. In most communities, more than 60% have upper secondary education. The education is as follows: education is a conscious effort for the development of personality and the development of Indonesian human abilities both physically and spiritually in the family, school, and community to promote development and unity. Indonesian nation to achieve a just, prosperous and prosperous society based on Pancasila.

In essence, this activity is a solution to the lack of knowledge on handling drowning victims through a community training approach or the involvement of partners. The expected post-changes are as follows:

Tabel 2. Presentation of Knowledge Level

Education	Presentation
Know Do	68.6
I do not Know Do	31.4
Total	100.0

## Discussion

Effect of earthquake disaster preparedness counseling on student knowledge at SD Muhammadiyah Trisigan Murtigading Sanden Bantul. From the results of community



service in Perigi Village, Pulau Pinang District, it was found that the community had been able to carry out first aid for drowning people with the Basic Life Support technique of 68.6%. This is in line with Latipun's (2006) research that several internal factors that can affect a person's knowledge, among others, are nature, personality, innate talent, intelligence, and age. At a certain age, a person experiences a development and maturation process. The age factor is in line with individual experience. The older a person is, the more experience the individual has. According to (Notoatmodjo, 2012), knowledge or cognition is critical in shaping one's actions or behavior. Knowledge will last longer than behavior that is not based on knowledge. That understanding is the ability to clarify known objects and interpret the material correctly. Acceptance of new behavior or adoption of behavior based on knowledge, awareness, and a positive attitude, then the behavior will be lasting. On the other hand, if the behavior is not based on knowledge and awareness, it will not last long (Notoatmodjo, 2014, 2011). The results achieved are also in line with those carried out by Jacklin Rifka Sasikome (2015), namely the effect of flood disaster counseling on the preparedness of Soegiyo Pranoto Catholic Junior High School students in Manado to face floods.

## Conclusion

Service activities have been carried out as First Aid training for Drowning Persons with Basic Life

Support Techniques. The training begins with coordination with partners, consolidation meetings, and implementation of activities. However, it is hoped that this activity will not end in service activities but can also be formed with a health-conscious community. They can transfer the knowledge they get to the community. Village officials' role is instrumental in sharing knowledge and information with the community.

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